

CUROX[®]A-390

Acetyl acetone peroxide; Tert. Butyl peroxybenzoate
CAS#37187-22-7; 614-45-9
Liquid mixture

Description

Nearly colourless mobile liquid, consisting of peroxides based on acetyl acetone and tert. butyl peroxybenzoate, essentially de-sensitised with diacetone alcohol. This ketone peroxide is used as an initiator (radical source) in the curing of unsaturated polyester resins. Main application: curing filament wound parts at ambient and elevated temperature in combination with cobalt accelerators.

Technical Data

Appearance	Nearly colourless liquid
Active oxygen	Approx 4.5 % w/w
De-sensitising agent	Diacetone alcohol
Density at 20°C	Approx. 1.07 g/cm ³
Viscosity at 20°C	Approx. 34 mPa.s
Miscibility	Miscible with alcohols, phthalates
Critical temperature (SADT)	Above 60°C
Recommended storage temperature	0 to 25°C
Maintenance of activity at 25°C as from date of production	8 months

Application

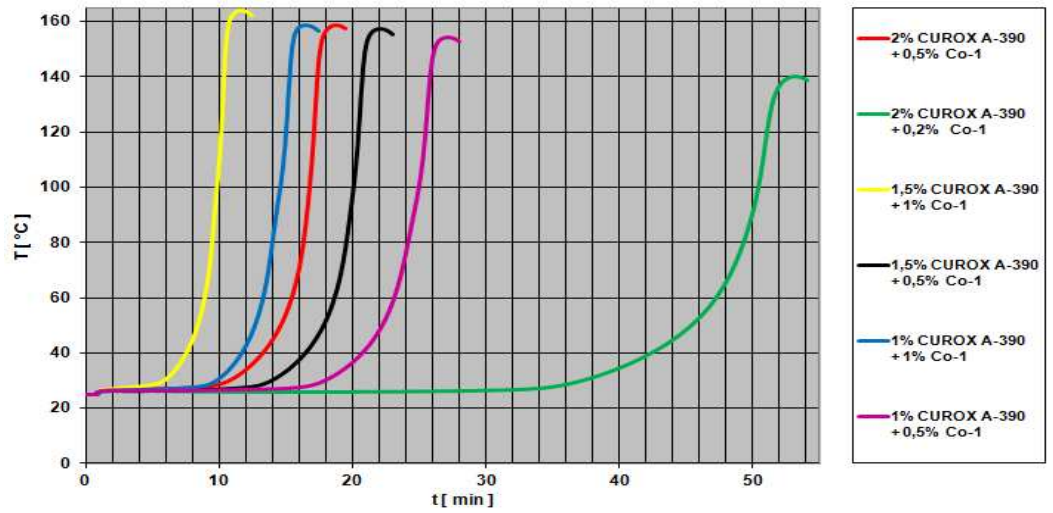
POLYESTER CURING: Curing agent for all UP resin types at ambient temperature in combination with cobalt accelerators. Standard dosage level: 1-3% as supplied, with 0.5-2% of a 1% cobalt solution. Not suitable for Vinylester resins. "Pot life" (gel time of resin + peroxide + accelerator) relatively short, but may be prolonged by adding Inhibitors.

CURING PERFORMANCE: Strong evolution of heat, therefore short mould release times and very good mould release factors ($f_{MR} = t_{MR}/t_{gel}$). Even at low ambient temperatures relatively rapid curing, especially in combination with Accelerator CA-12. Some fillers, pigments and stabilisers can disturb or even prevent the curing procedure. Occasionally, greenish or mottled discolouration can be observed in finished parts, post curing above 60°C may then be applied. Stronger curing performance than standard AAP types

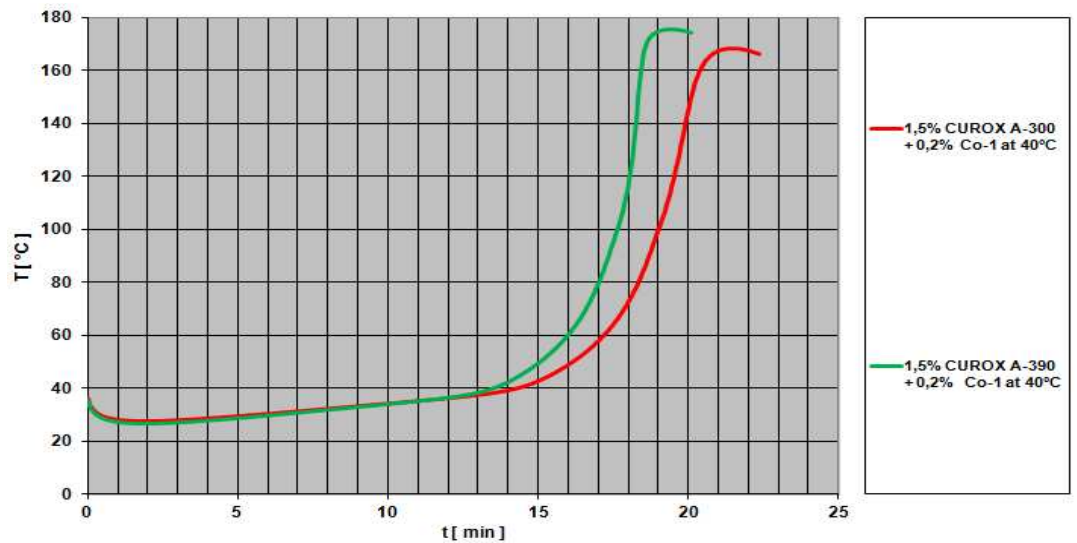
PROCESSING METHODS: Suitable in particular for filament winding and centrifugal casting of pipes; can be applied also in RTM and continuous laminating processes.

SPRAY EQUIPMENT: Use spray equipment in accordance with manufacturer's instructions. Ensure all safety devices are operational. Do not clear gun by spraying Ketonperoxides into the air.

Reactivity:



Measurements in compliance with DIN 16945 at 25°C with OPA resin (20g in a test tube)						
Medium reactive resin type (OPA)		100	100	100	100	100
CUROX® A-390	[Vol-%]	2.0	2.0	1.5	1.5	1.0
Accelerator Co 1	[Vol-%]	0.5	0.2	1.0	0.5	1.0
Curing data						
Gel time 25 -30°C t_{gel}	[min]	10.5	37.0	5.5	14.0	10.0
Gel time 25 -35°C t_{gel}	[min]	12.5	40.0	7.0	15.5	11.0
Curing time t_{max}	[min]	18.5	53.0	11.5	22.0	16.5
Peaktemperature T_{max}	[°C]	159	140	163	157	153



Measurements in compliance with DIN 16945 at 40°C with OPA resin (20g in a test tube)			
Medium reactive resin type (OPA)		100	100
CUROX® A-300	[Vol-%]	1.5	
CUROX® A-390	[Vol-%]		1.5
Accelerator Co 1	[Vol-%]	0.2	0.2
Curing data			
Gel time 40 - 45°C t _{gel}	[min]	15.5	14.5
Gel time 40 - 50°C t _{gel}	[min]	16.0	15.0
Curing time t _{max}	[min]	21.5	19.5
Peaktemperature T _{max}	[°C]	168	176

Further information on suitable curing agents for unsaturated polyester resins is given in our application brochures on this subject.

Standard Packaging

The standard package size of Curox® A-390 is 25 kg polyethylene bottles.

Disclaimer

This information and all further technical advice are reflecting our present knowledge and experience based on internal tests with local raw materials with the purpose to inform about our products and applications. The information should not be construed as guaranteeing specific properties of products described or their suitability for a particular application, nor as providing complete instructions for use. The information implies no guarantee for product and shelf life properties, nor any liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. We reserve the right to make any changes according to technological progress or further developments.

Application and usage of our products based on our technical advice is out of our control and sole responsibility of the user. The user is not released from the obligation to conduct careful inspection and testing of incoming goods in order to verify the suitability for the intended application.

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